THE PROCESS BEGINS

Workbook on Water

Manitoba

MANITOBA'S BASINS

CONTENTS:

	Page No.
Ministers' Message	1
Land and Water Strategy	2
A Strategy For Water	4
Water Policies	7
1. Water Quality	7
2. Conservation	9
3. Use and Allocation	13
4. Water Management Infrastructure	15
5. Flooding	16
6. Drainage	17
Questionnaire	19
Glossary	20

To Concerned Manitobans

Drought, flood and pollution are just some of the headlines we see regularly in our newspapers, yet we often feel that Manitobans are somehow immune to such disasters.

1988 has clearly demonstrated how vulnerable the province is to drought and erosion, and why we must conserve our resources. We must move towards a conservation strategy that will ensure our economic prosperity and conserve our resource base for our children and their children.

With your help this process can now begin... through the development of a provincial water management strategy. This strategy will define policies for managing our water resources. A water management strategy can only be developed through your input and involvement. Government alone cannot take on a challenge of this magnitude without first asking you to pitch in and voice your ideas, concerns and vision. Together, we can guide the management of our water resources and ensure their viable uses.

Honourable Jack Penner

Honourable Glen Findlay

The Land And Water Strategy

The Government of Manitoba has adopted the principles of Sustainable Development enunciated by the World Commission on Environment and Development chaired by the Prime Minister of Norway, Madam Gro Harlem Brundtland. Their report, entitled 'Our Common Future', defined Sustainable Development as:

"development which ensures that the utilization of resources and the environment today does not damage prospects for their use by future generations."

The key concept advanced by 'The Brundtland Report' was that the economy and the environment were inextricably linked. Economic growth is a necessary prerequisite for environmental conservation. Humanity must use resources in order to survive and prosper but we must manage them wisely if they are to be there in the future.

Of primary importance to Manitobans is the development and conservation of our natural resources: the soil, water, forest, wildlife, fisheries, and mineral resources that are vital to our economic future. Our land and water resources have been affected by our activities and we are losing opportunities for future development. The recent drought has illustrated just how fragile our resource based industries are, especially agriculture. The time has come to rebuild those resources so that they will always be there for our use and enjoyment.

What we do on land affects our water resources. Therefore, it is vital that we manage land and water together, with an integrated approach. The Government of Manitoba has taken these ideas and proposed a Land and Water Strategy which is based on the following objectives:

1. To sustain and enhance resource productivity and improve the environmental quality of Manitoba.

2. To improve and diversify income and job opportunities.

In the past, these have been viewed as mutually exclusive goals. This is most certainly not the case any longer. We can conserve and enhance our resource base and generate economic activity at the same time.

For example, providing incentives for soil conservation will conserve our vital soil resources and enhance crop productivity. Tree planting will improve wildlife habitat, prevent soil erosion, and result in a forest resource that can be the basis for sustainable economic development. Improving the quality of lakes and rivers, and the construction of carefully managed water retention projects will enhance our quality of life, improve water supplies, and encourage tourism activities where none existed previously. Wildlife and fisheries habitat enhancement and protection will preserve species for our enjoyment plus ensure that genetic resources are conserved for agricultural crop variety development.

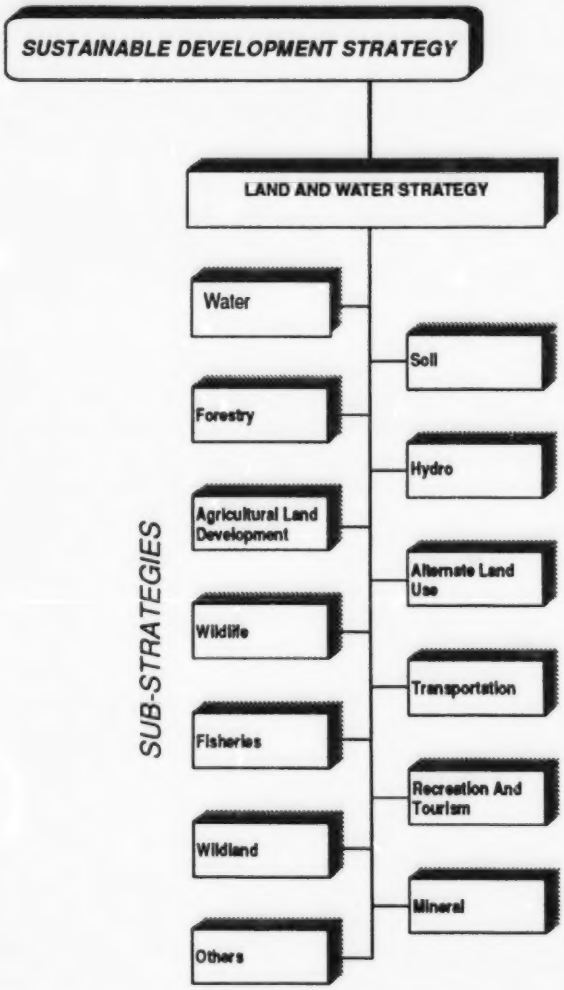
The government is considering ways to link the planning and management of our land and water resources more effectively. For example, the Province could, with the cooperation of

municipalities and the public, prepare strategies for the basins and watersheds shown in this workbook. Local government could broaden their own plans to address all land and water issues in their areas.

Our new approach will produce major benefits for rural communities. Manitoba's rural communities have undergone severe and wrenching change in the last few years. To assist those communities, we intend to use conservation as a tool for economic development, using the principles stated above. If we can diversify the rural economy and conserve the resources that support that economy, our rural communities will stabilize and prosper. Urban communities will also benefit from this approach since resource enhancement will improve recreational opportunities, preserve endangered species, and generally contribute to the economic well-being of Manitobans. Much of the land in rural Manitoba is privately owned. Regulating the use of private land is difficult, often ineffective, and may seriously affect a farmer's ability to make a living. Governments must retain the right to protect the environment through regulation, and will continue to do so, however, past experience clearly shows that regulations alone do not guarantee conservation or effective resource management.

In order to encourage conservation on private land, the government of Manitoba is taking the approach that we must assist landowners to undertake activities that best suit their economic needs, while meeting the province's conservation and resource management objectives at the same time.

What has been outlined above is just the beginning of a process. We are taking these concepts to you, the public, for consultation and review. We look forward to your ideas. We know that Manitobans care about the future of our economy and resource base. The joining of economic and environmental concepts will stimulate exciting and vigorous ideas that will take us into the 21st century.



As part of the Provincial Government's commitment to Sustainable Development a Land and Water Strategy is being prepared with water as the first resource to be addressed.

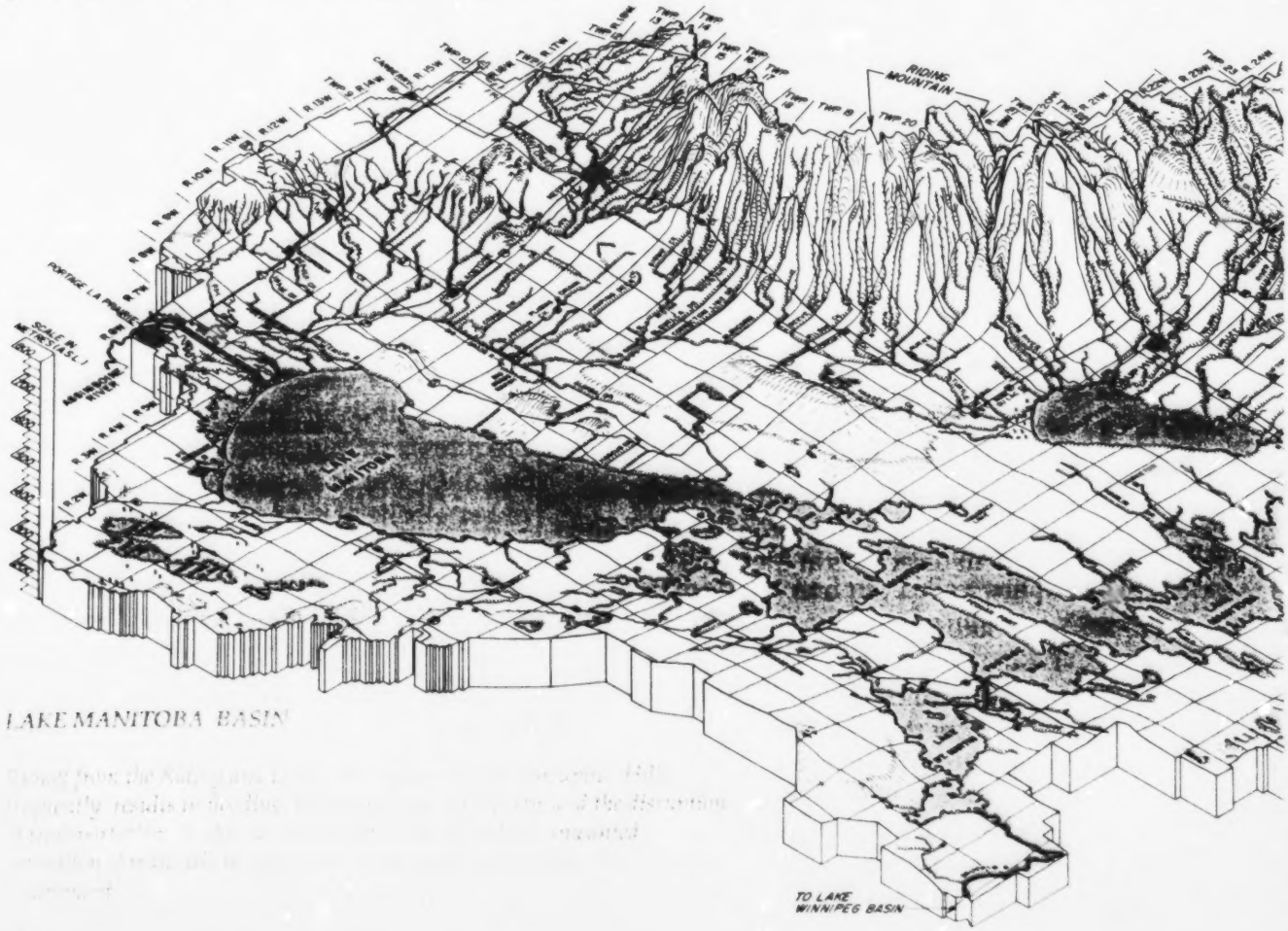
Why a Water Strategy?

The provincial government has proposed the development of a series of water policies to guide the management of our water resources and safeguard them for present and future generations of Manitobans.

Coordination and cooperation is required to deal with the complex jurisdiction that exists over water as well as the mutual dependence of the environment and economy.

Provincial land use policies are already in place, in recognition of the importance of our land resources and the need to guide their use and development. Completion of a set of water policies could pave the way for preparation of management plans for major river basins and smaller watersheds, based on an integrated approach to managing all our resources. Stewardship cannot be achieved by relying solely on existing government structures. It will require involvement and decision making by resource users.

The draft water policies presented in the following pages are intended to encourage comments and suggestions from a wide readership. They are expected to undergo revision and refinement based on input obtained through a province-wide public consultation process.



LAKE MANITOBA BASIN

Some Facts to Consider...

❑ *About 90% of our population and most of our agricultural land is situated in the drier, southern basins of the province. Most of Manitoba's water supply is concentrated far from these southerly basins — in the central and northern areas of the province.*

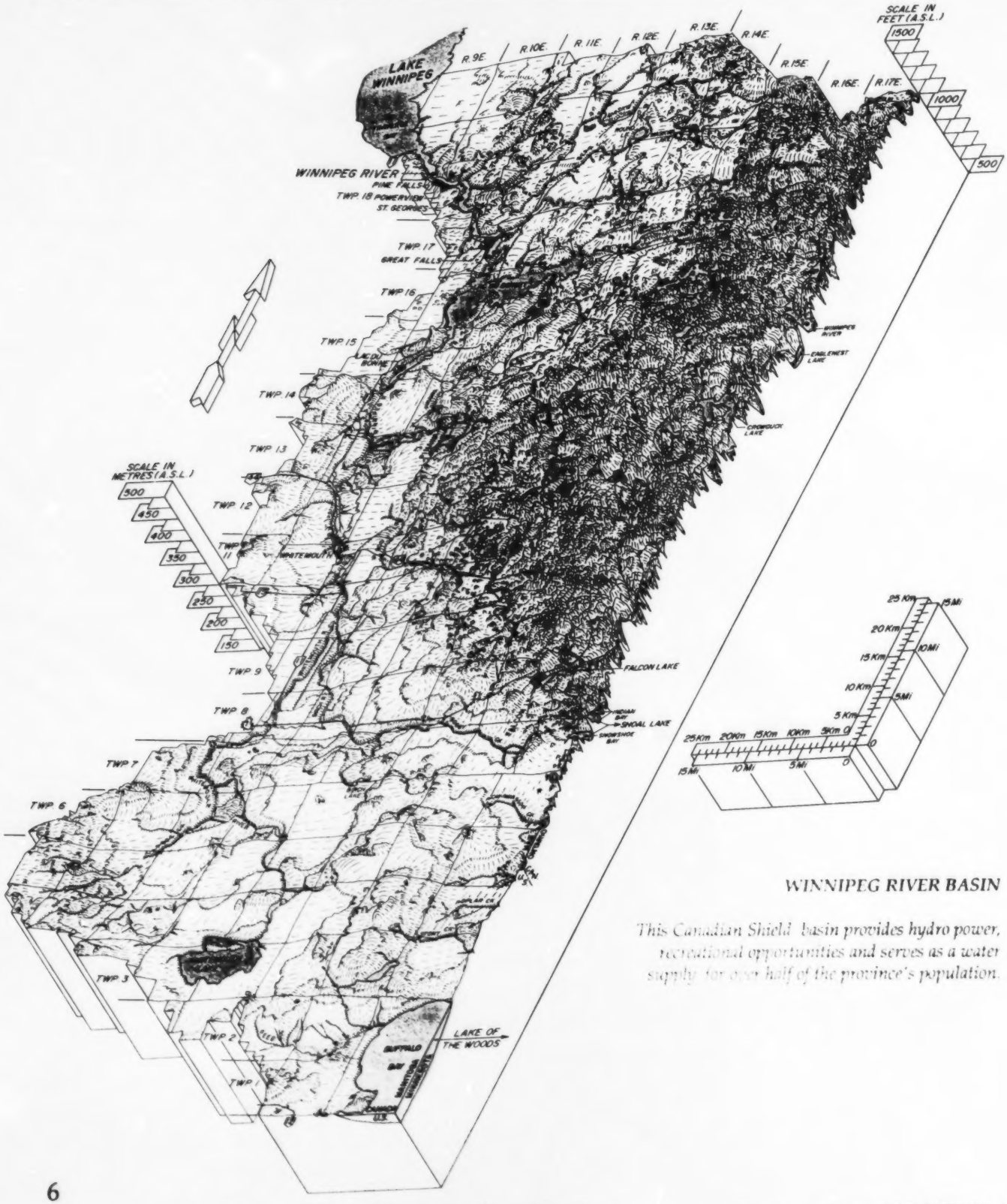
❑ *More than 70% of our streamflow originates outside Manitoba's boundaries in Alberta, the Territories, Saskatchewan, Ontario, Montana, the Dakotas and Minnesota.*

❑ *Our lands are prone to floods and droughts because of wide variations in seasonal and geographical flows.*

❑ *Our surface water and our groundwater are highly susceptible to pollution and uses that threaten their sustainability.*

❑ *Use of our water resources often involves competition and conflict among growing number of users.*

❑ *Our needs for water are increasing dramatically, but supplies are limited and in some areas already fully allocated.*



WINNIPEG RIVER BASIN

This Canadian Shield basin provides hydro power, recreational opportunities and serves as a water supply for over half of the province's population.

OBJECTIVE:

To ensure that surface water and groundwater quality is adequate to meet the needs of all users as well as to protect aquatic ecosystems.

POLICY 1.1

The provincial water quality objectives shall be adopted and continually refined to protect water uses for Manitobans.

POLICY 1.2

Water quality shall be enhanced, where possible, through the active management of water resources.

POLICY 1.3

Water quality enhancement programs will be designed to deliver economic, cultural, environmental quality and heritage benefits to Manitobans.

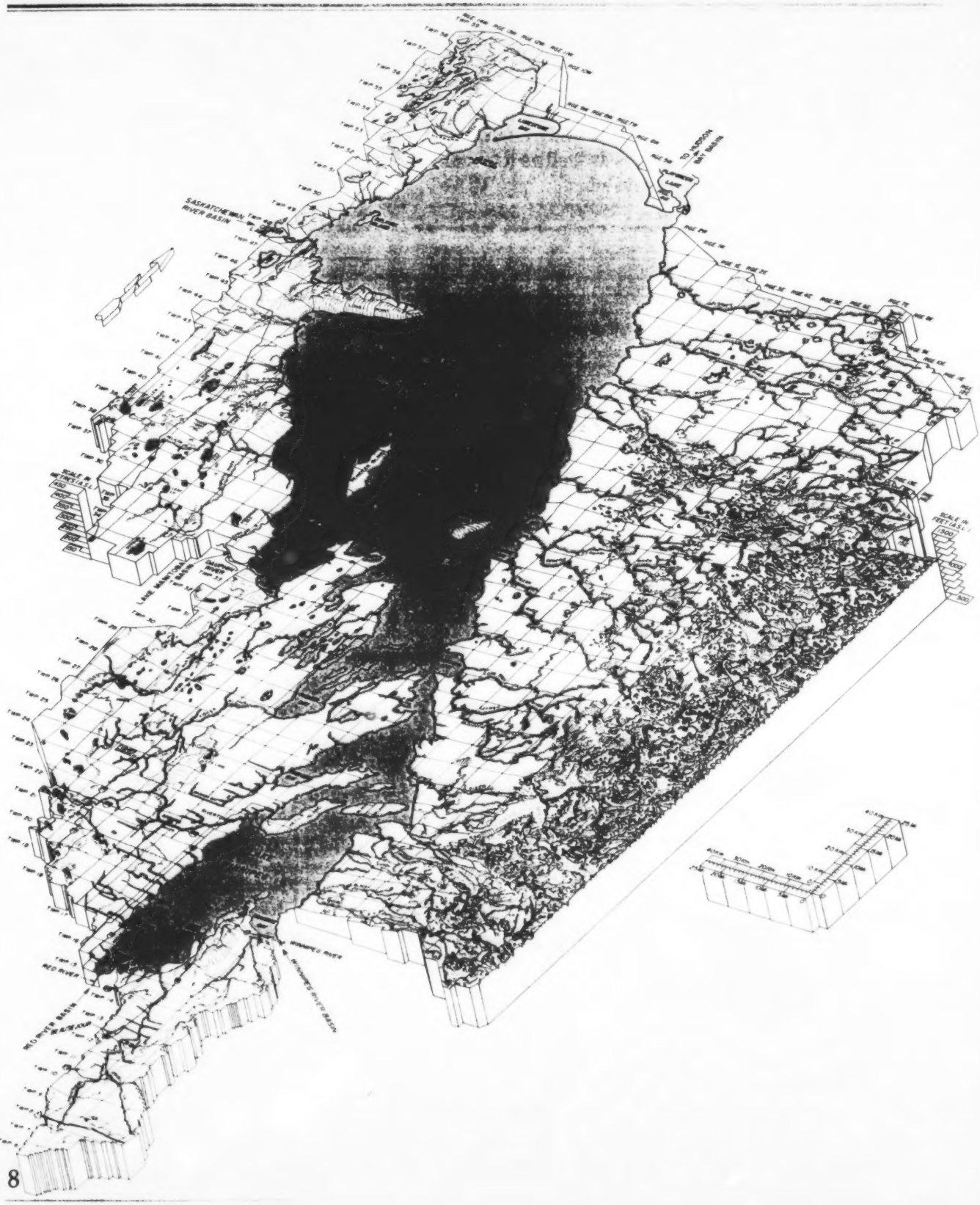
POLICY 1.4

Wastewater discharges shall be improved and non-point sources of pollution shall be decreased to achieve identified water quality objectives.

POLICY 1.5

Pollution control programs will be designed in consultation with affected user groups and implemented in such a manner as to cause minimum disruptions to established land and water uses.

NOTES:


SASKATCHEWAN RIVER BASIN
RED RIVER BASIN
WINNIPEG RIVER BASIN
SCALE IN FEET (S.L.)

OBJECTIVE:

To conserve and manage the lakes, rivers, and wetlands of Manitoba so that they can continue to provide economic, aesthetic, and environmental benefits to existing and future generations.

The conservation of water and shoreland habitat is a key water management concern.

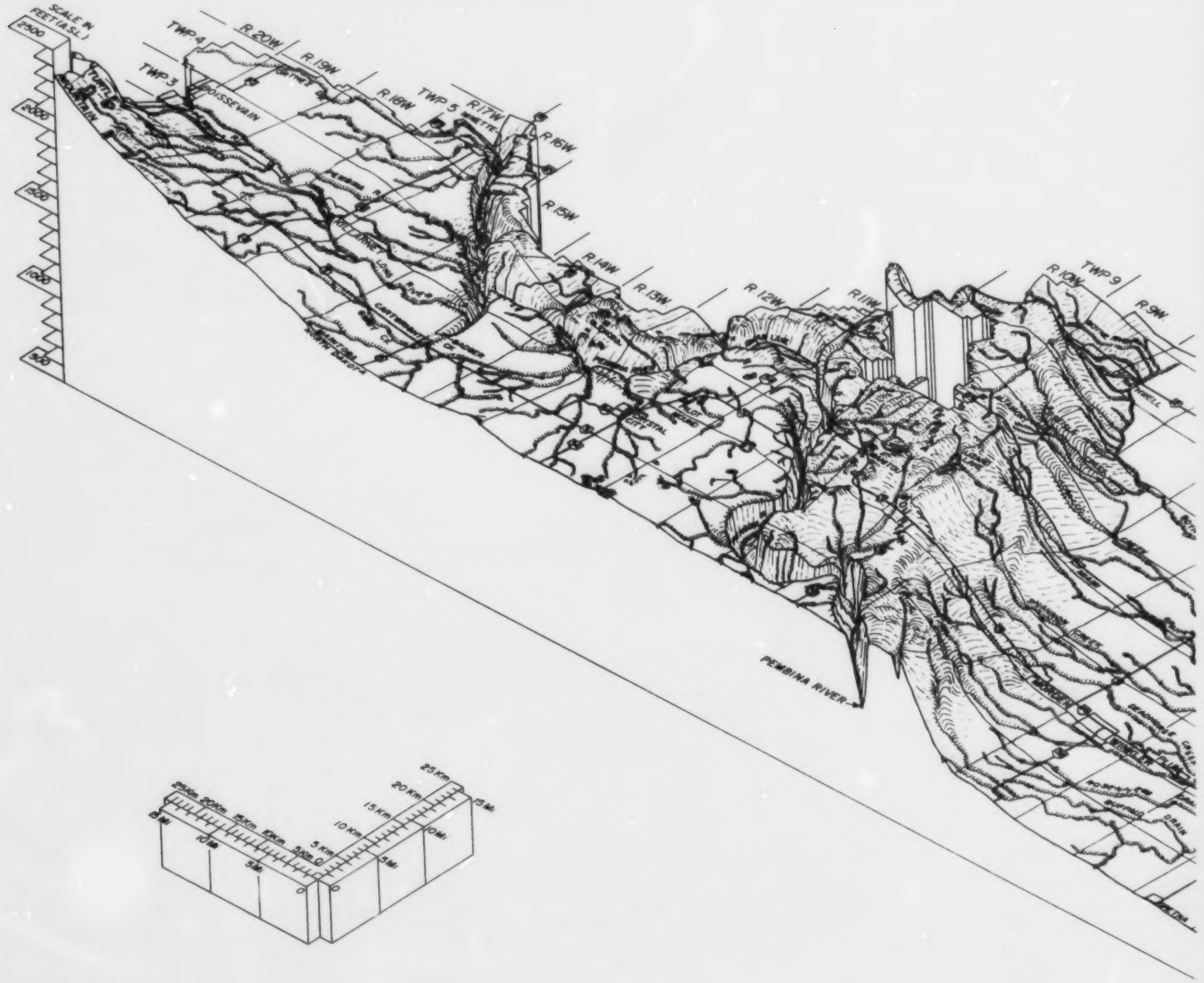
POLICY 2.1

Significant river, lake, and shoreland habitat and the general environmental, subsistence, and economic values of rivers and lakes shall be conserved for the benefit of Manitobans.

POLICY 2.2

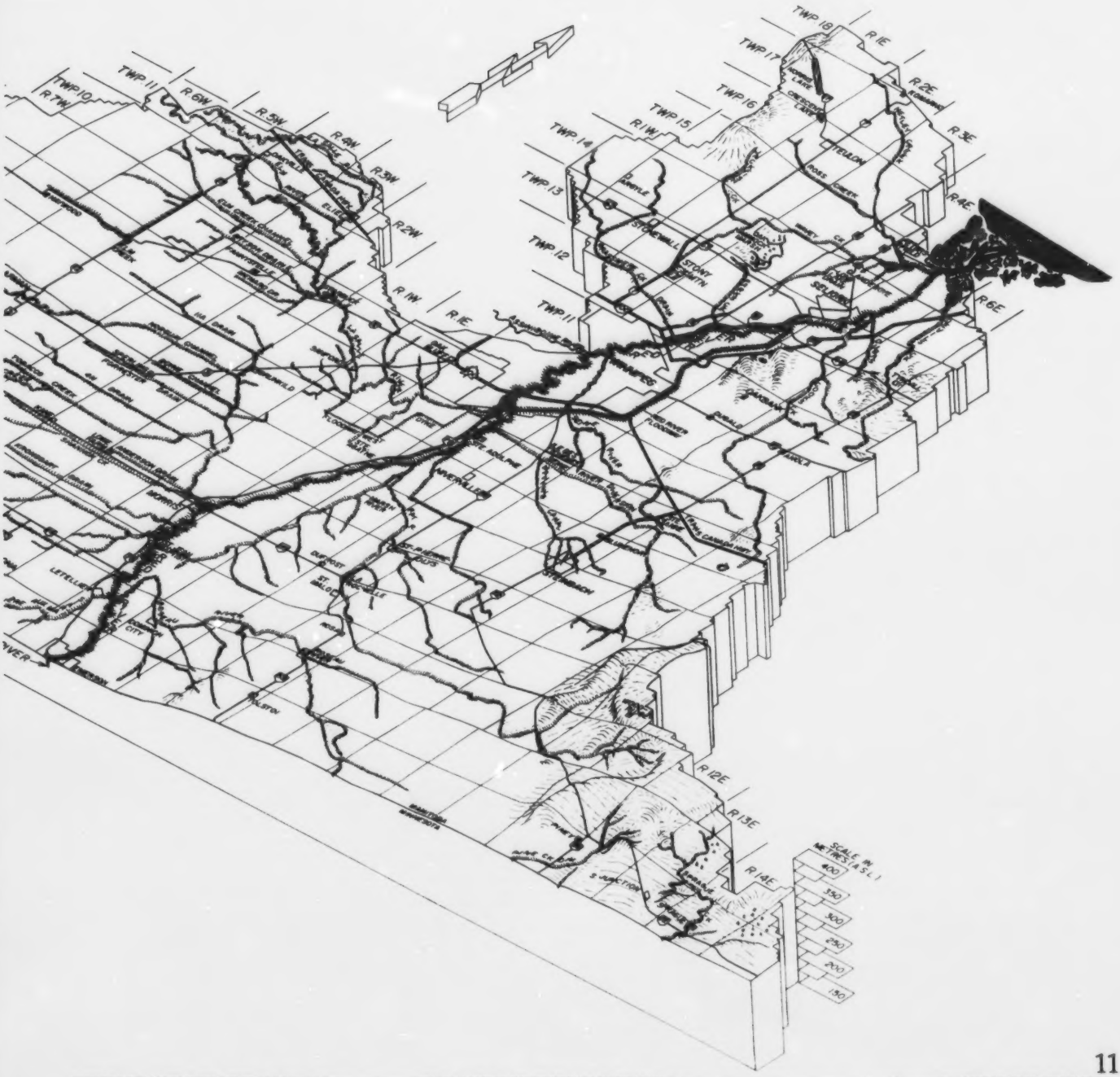
Soil conservation, wetland retention, and the application of appropriate land use practices shall be promoted by the provision of incentives, not only as essential elements of water conservation and protection, but also as key measures to reduce siltation impacts, downstream flooding, and non-point source pollution.

NOTES:



RED RIVER BASIN

One quarter of the Red River basin has no potable groundwater. In much of the basin, surface water is unavailable or totally allocated.


TWP 18
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TWP 11
R 6E
TWP 10
R 7W
R 6W
R 5W
R 4W
R 3W
R 2W
R 1W
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R 12E
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SCALE IN METRES (A.S.L.)
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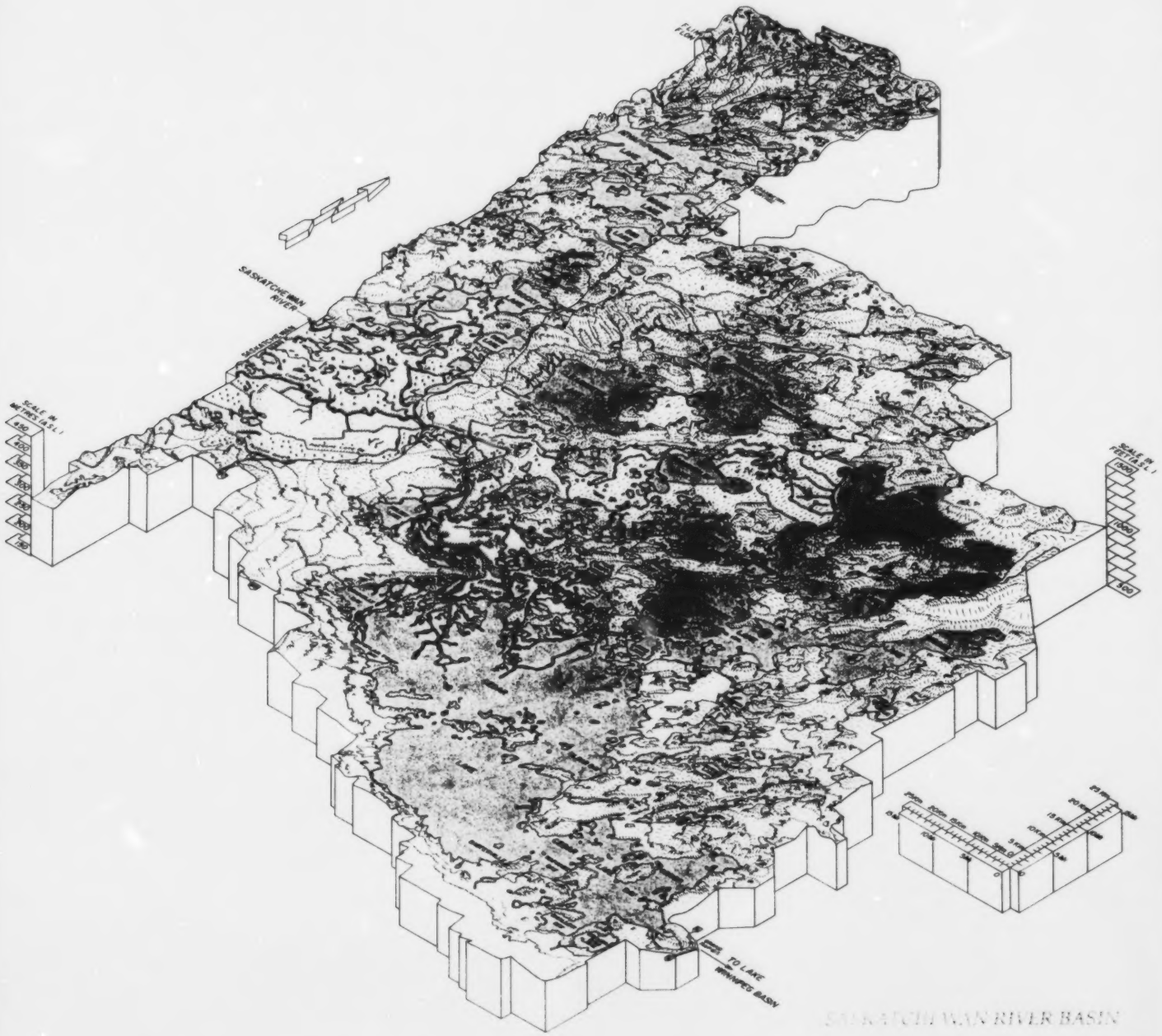


SASKATCHEWAN RIVER BASIN

...Basin, Province of Alberta and Saskatchewan.

OBJECTIVE:

To facilitate use of the province's water resource endowment for the overall economic, aesthetic, and environmental benefit of Manitobans and to ensure that the required surface water and groundwater supplies are maintained in a long-term sustainable state.

POLICY 3.1

Manitoba's water resources shall be used to achieve and maintain economic well-being through their utilization and optimum economic allocation for domestic, municipal, industrial, commercial, and agricultural purposes as well as in-stream uses such as recreation, navigation, aesthetic enjoyment, fish and wildlife habitat, waste assimilation, and power generation.

POLICY 3.2

Allocation priorities for groundwater and surface water shall be determined through a basin planning process for Manitoba taking into account existing commitments, economic requirements, environmental integrity, and the protection of potable water supplies.

POLICY 3.3

Groundwater development and utilization shall be controlled so that the long-term sustainable yields of aquifers are not exceeded and uses are not negatively impacted.

POLICY 3.4

Surface water shall be managed to ensure reliability of supplies for the priority of uses of Manitobans.

POLICY 3.5

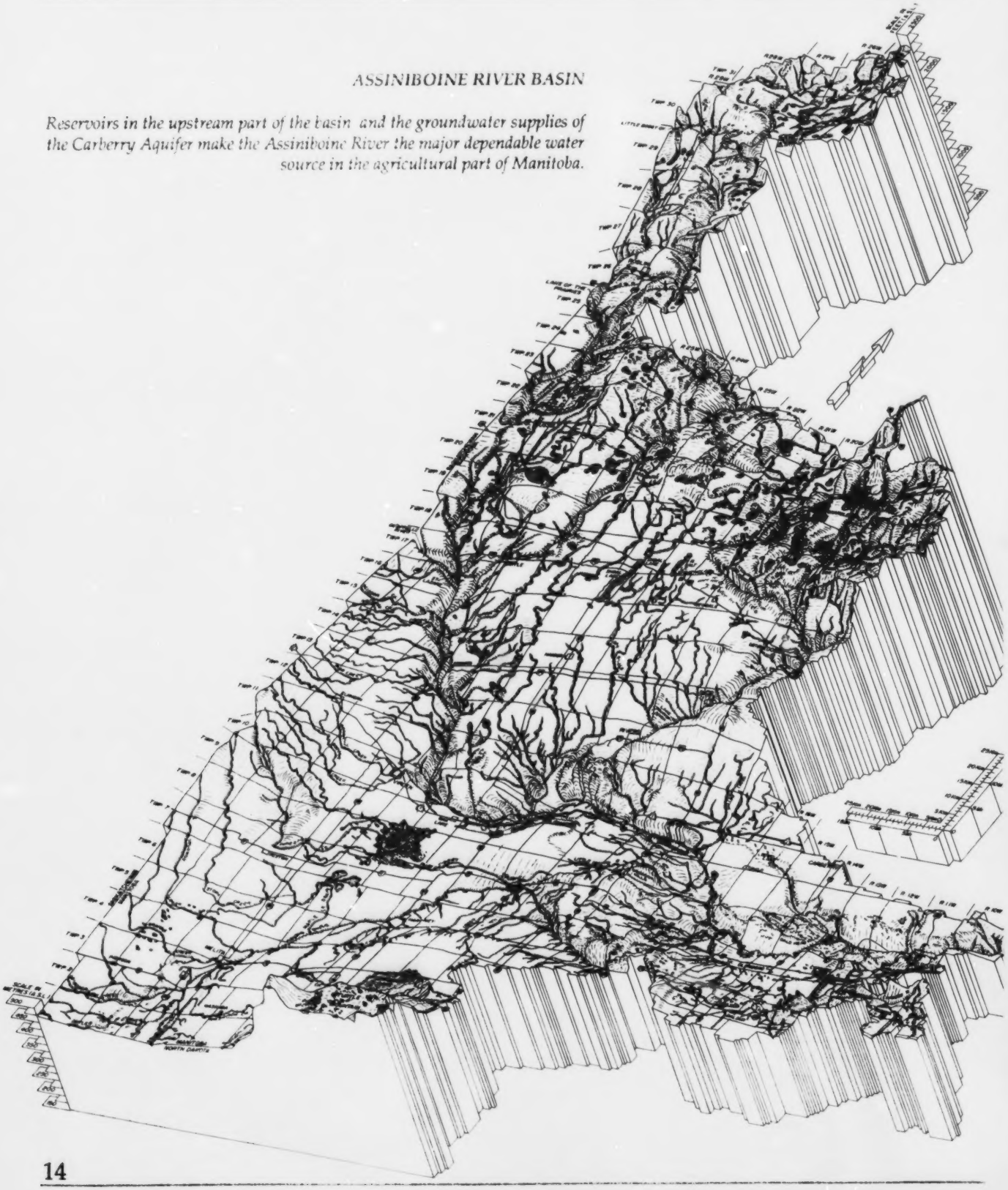
Interbasin transfers of water shall be permitted when justified based on full examination of all relevant economic and environmental factors.

In southern Manitoba, streamflows are highly variable. Regulation is often required to ensure that reliable supplies are available.

NOTES:

ASSINIBOINE RIVER BASIN

Reservoirs in the upstream part of the basin and the groundwater supplies of the Carberry Aquifer make the Assiniboine River the major dependable water source in the agricultural part of Manitoba.



OBJECTIVE:

To develop the province's water resources to ensure the availability of water supplies to meet priority needs and to support economic opportunities.

POLICY 4.1

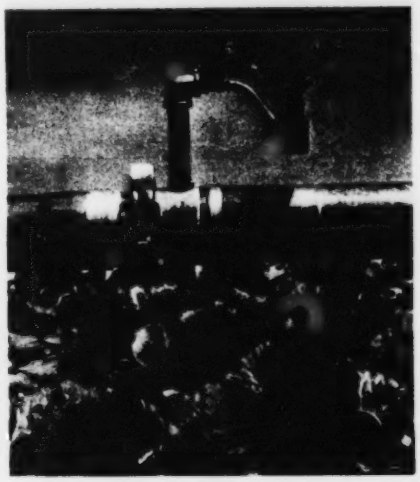
Where demand for water is approaching the available supply, the first option shall be "demand management".

POLICY 4.2

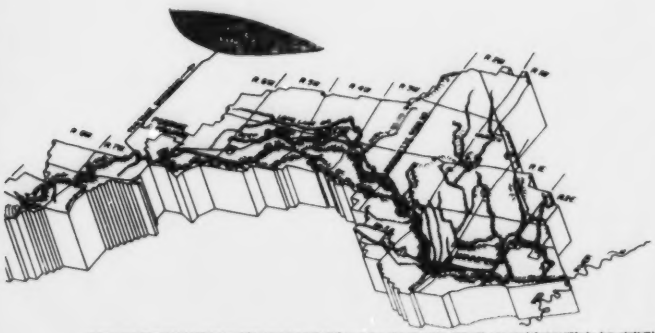
Irrigation, industrial or other development proposals involving direct or indirect water use shall consider impacts on existing and potential water uses as well as impacts on the environment.

POLICY 4.3

The cost of developing, operating, and maintaining the water resource infrastructure shall be apportioned among the beneficiaries in accordance with their share of benefits.



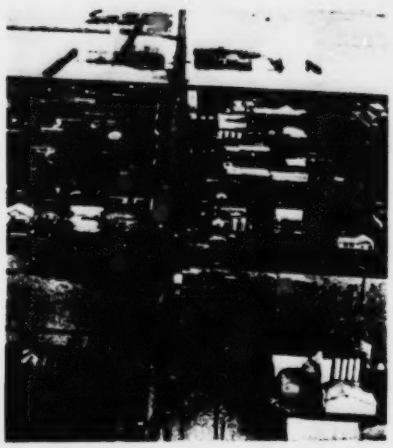
Irrigation increases crop yields and can minimize weather related uncertainties for a variety of Manitoba crops.



NOTES:

OBJECTIVE:

To alleviate human suffering and minimize the economic costs of damages caused by flooding.



The bulk of Manitoba's streamflow pass during the spring months as a result of snowmelt. The combination of high winter precipitation, rapid snowmelt or spring rains periodically results in runoff far in excess of stream channel capacities.

Security and protection shall be provided to Manitobans by:

POLICY 5.1

Ensuring that development on land subject to flooding, or hazards such as water erosion, bank instability, ice damage, landslides, or subsidence shall occur under a planning framework that takes into account people's economic requirements, the limitation of public costs and liabilities, and environmental impact.

POLICY 5.2

Fostering economically viable measures to alleviate personal and property damage to existing development in flood prone areas.

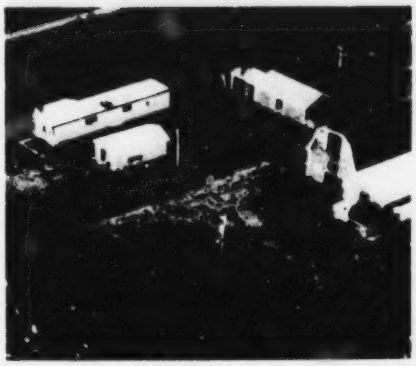
NOTES:

OBJECTIVE:

To enhance the economic stability of Manitoba's agricultural community.

POLICY 6.1

Where runoff from excess rainfall is removed from agricultural land, it shall be based on the capability of the soil to sustain agriculture and on technical, economic, and environmental criteria, taking into account the impact on the farm unit and the surrounding community.



Approximately 4.2 million acres of fine textured clay soils require drainage.

POLICY 6.2

Maintenance and reconstruction of drainage systems shall be of higher priority than the expansion into marginal lands or fringe areas.

NOTES:

COMMENTS WELCOME

The water policies presented in this booklet are intended to encourage comments and suggestions from a wide readership. Your comments will assist in further development and refinement of these policies.

Please complete the attached questionnaire and return it to the address provided.

Thank you for your help !

NOTES:

POLICY

COMMENTS

5. FLOODING

To alleviate human suffering and minimize the economic costs of damages caused by flooding.

Security and protection shall be provided to Manitobans by:

Policy 5.1
Ensuring that development on land subject to flooding, or hazards such as water erosion, bank instability, ice damage, landslides, or subsidence shall occur under a planning framework that takes into account people's economic requirements, the limitation of public costs and liabilities, and environmental impact.

Policy 5.2
Fostering economically viable measures to alleviate personal and property damage to existing development in flood prone areas.

6. DRAINAGE

To enhance the economic stability of Manitoba's agricultural community.

Policy 6.1
Where runoff from excess rainfall is removed from agricultural land, it shall be based on the capability of the soil to sustain agriculture and on technical, economic, and environmental criteria, taking into account the impact on the farm unite and the surrounding community.

Policy 6.2
Maintenance and reconstruction of drainage systems shall be of higher priority than the expansion into marginal lands or fringe areas.

GENERAL COMMENTS AND IDEAS

SPECIFIC CONCERNS

FUTURE VISION

Your Return Questionnaire

This questionnaire lists the water policy and their objectives. Your comments and additional suggestions are welcome.

Please write your comments in the space provided and attach additional sheets if necessary.

Thank you for your help and contribution.

POLICY

COMMENTS

1. WATER QUALITY

To ensure that surface water and groundwater quality is adequate to meet the needs of all users as well as to protect aquatic ecosystems.

Policy 1.1
The provincial water quality objectives shall be adopted and continually refined to protect water uses for Manitobans.

Policy 1.2
Water quality shall be enhanced, where possible, through the active management of water resources.

Policy 1.3
Water quality enhancement programs will be designed to deliver economic, cultural, environmental quality and heritage benefits to Manitobans.

Policy 1.4
Wastewater discharges shall be improved and non-point sources of pollution shall be decreased to achieve identified water quality objectives.

Policy 1.5
Pollution control programs will be designed in consultation with affected user groups and implemented in such a manner as to cause minimum disruptions to established land and water uses.

2. CONSERVATION

To conserve and manage the lakes, rivers, and wetlands of Manitoba so that they can continue to provide economic, aesthetic, and environmental benefits to existing and future generations.

Policy 2.1
Significant river, lake, and shoreland habitat and the general environmental, subsistence, and economic values of rivers and lakes shall be conserved for the benefit of Manitobans.

Policy 2.2
Soil conservation, wetland retention, and the application of appropriate land use practices shall be promoted by the provision of incentives, not only as essential elements of water conservation and protection, but also as key measures to reduce siltation impacts, downstream flooding, and non-point source pollution.

POLICY

COMMENTS

3. USE AND ALLOCATION

To facilitate use of the province's water resource endowment for the overall economic, aesthetic, and environmental benefit of Manitobans and to ensure that the required surface water and groundwater supplies are maintained in a long-term sustainable state.

Policy 3.1
Manitoba's water resources shall be used to achieve and maintain economic well-being through their utilization and optimum economic allocation for domestic, municipal, industrial, commercial, and agricultural purposes as well as in-stream uses such as recreaction, navigation, aesthetic enjoyment, fish and wildlife habitat, waste assimilation, and power generation.

Policy 3.2
Allocation priorities for groundwater and surface water shall be determined through a basin planning process for Manitoba taking into account existing commitments, economic requirements, environmental integrity, and the protection of potable water supplies.

Policy 3.3
Groundwater development and utilization shall be controlled so that the long term sustainable yields of aquifers are not exceeded and uses are not negatively impacted.

Policy 3.4
Surface water shall be managed to ensure reliability of supplies for the priority of uses of Manitobans.

Policy 3.5
Interbasin transfers of water shall be permitted when justified based on full examination of all relevant economic and environmental factors.

4. WATER MANAGEMENT INFRASTRUCTURE

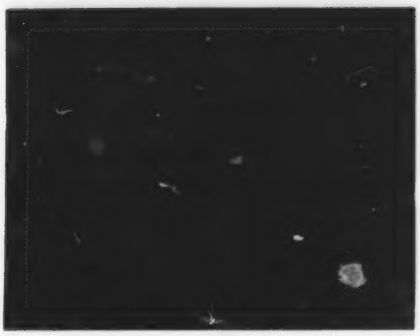
To develop the province's water resources to ensure the availability of water supplies to meet priority needs and to support economic opportunities.

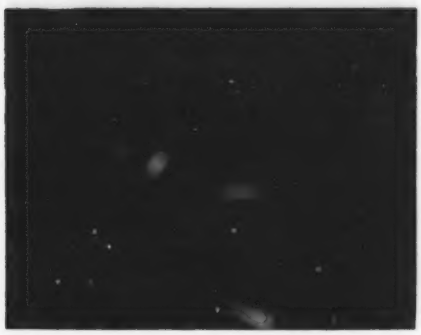
Policy 4.1
Where demand for water is approaching the available supply, the first option shall be "demand management".

Policy 4.2
Irrigation, industrial or other development proposals involving direct or indirect water use shall consider impacts on existing and potential water uses as well as impacts on the environment.

Policy 4.3
The cost of developing, operating, and maintaining the water resource infrastructure shall be apportioned among the beneficial in accordance with their share of benefits.

GLOSSARY





Aquatic - of or relating to water

Aquifer - water bearing rock, sand or gravel

Demand Management - the employing of measures to reduce the growth of water use through conservation

Heritage Resource - resource that should be maintained for future generations to enjoy

Lands Subject to Flooding/Flood Prone Area - lands below the one in one hundred year flood level

Non-Point Source of Pollution - pollution coming from an undefined source (eg. agricultural chemicals in runoff from fields)

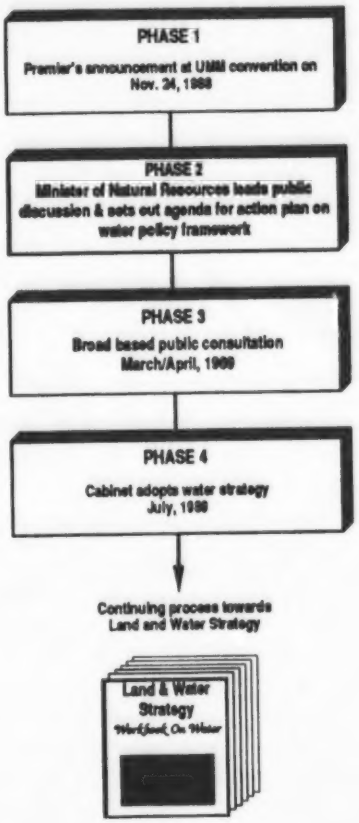
Sustainable Development - development which ensures that the utilization of resources and the environment today does not damage prospects for their use by future generations

Water Quality Objective - a numerical concentration or narrative statement which has been established to support and protect the designated uses of water at a specific site. A specific site may include all of Manitoba, a principal drainage basin, a watershed, a body of water or a portion of a body of water

Watershed/Basin - an area drained by a river and all its tributaries

NOTES:

AN INVITATION TO PARTICIPATE


PHASE 1
Premier's announcement at UMM convention on Nov. 24, 1988
PHASE 2
Minister of Natural Resources leads public discussion & sets out agenda for action plan on water policy framework
PHASE 3
Broad based public consultation March/April, 1989
PHASE 4
Cabinet adopts water strategy July, 1989
Continuing process towards Land and Water Strategy
Land & Water Strategy
Workbook On Water

Workshops will be held in the following communities:

Winkler	January 23
Brandon	January 24
Winnipeg	January 25
Gimli	January 26
Winnipeg	January 30
Beausejour	January 31
Portage la Prairie	February 1
Dauphin	February 2
The Pas	February 3
Thompson	February 6

Need more information or have additional comments?

Phone: 945-6784

Complete the Workbook...

Workbooks are a way of letting us know what you think. They list draft policies on a range of resources and are designed to encourage comments and suggestions for refining the policies. Water has been chosen as the first topic for discussion. Additional workbooks will be prepared for discussion at a later date.

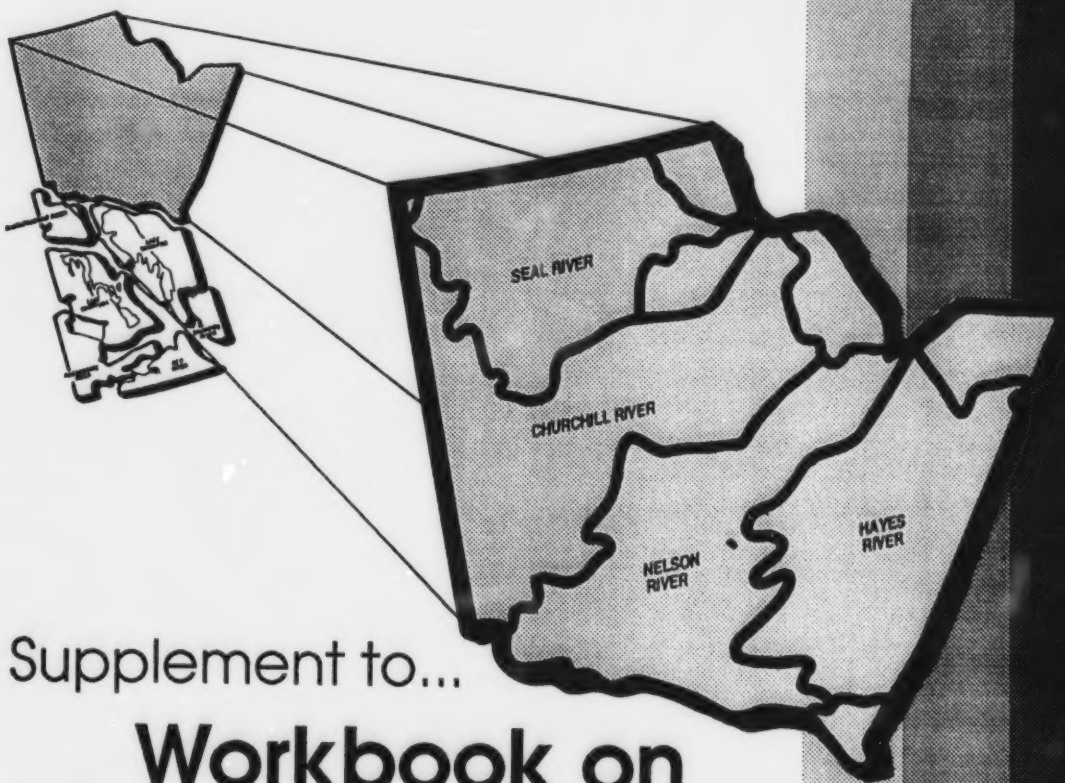
Every Manitoban will be given the oppurtunity to present ideas and concerns. Let us know what you think!

"Thank you for investing your time and energy in working toward a land and water strategy for Manitobans"

Honourable Gary Filmon

Reprinted Jan. 1989

MANITOBA'S NORTHERN BASINS

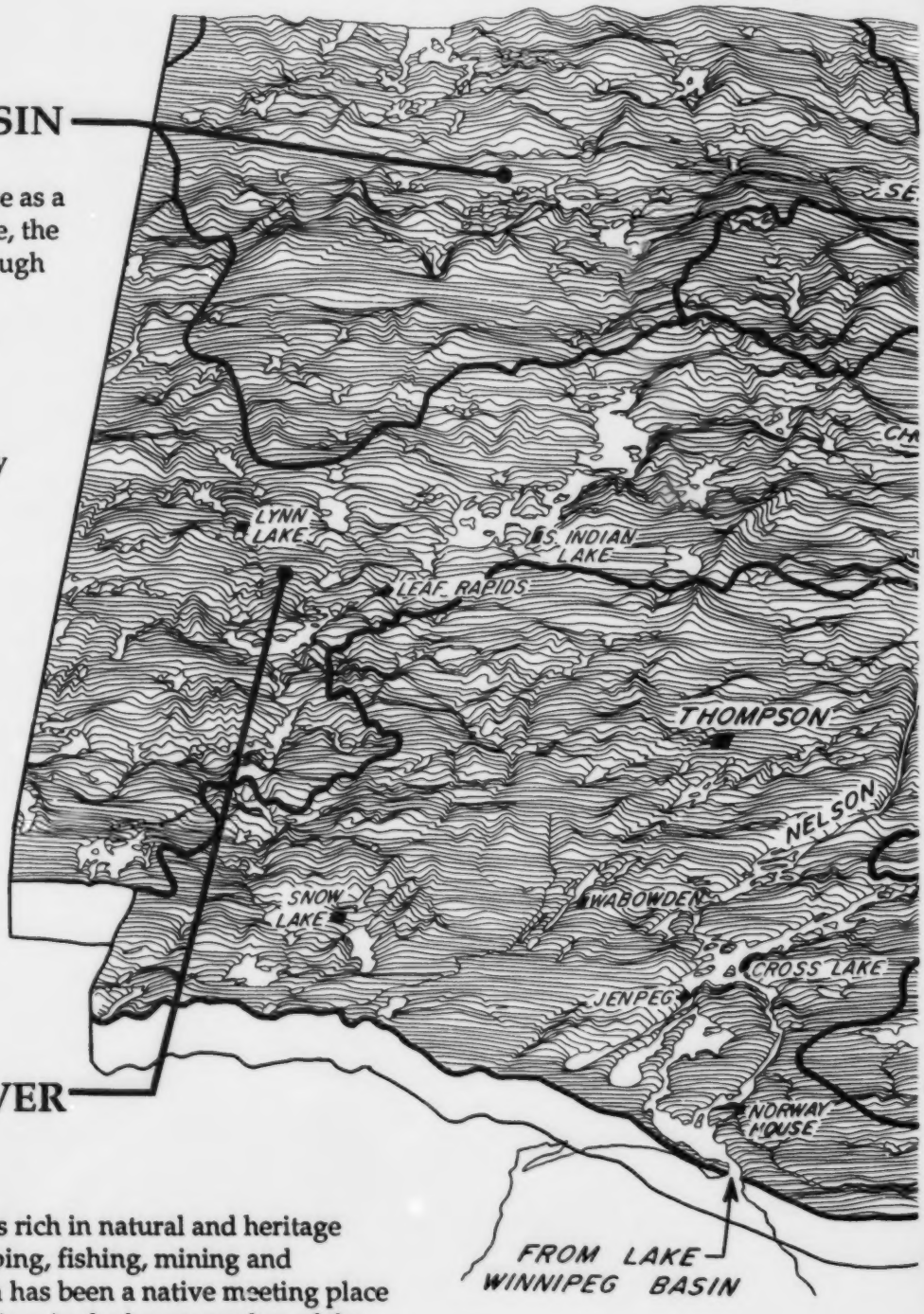


Supplement to...

Workbook on Water

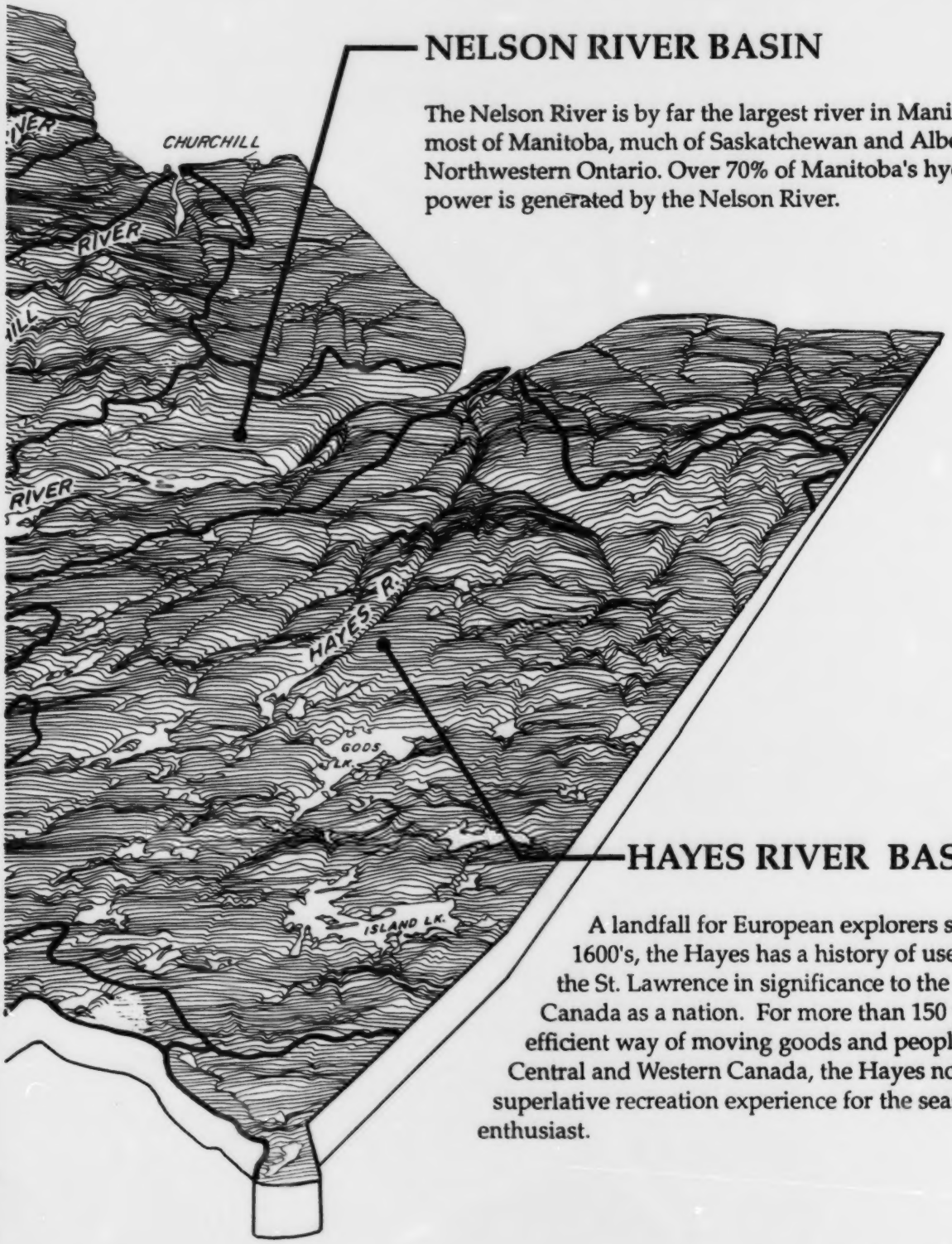
SEAL RIVER BASIN

Too wild and rugged for use as a trading or exploration route, the Seal River today flows through lands unchanged since Europeans first set foot in North America. Today's experienced wilderness traveller can canoe past dramatic scenery created by massive eskers crossing the river channel, and may glimpse eagles, polar bears, seals by the rapids, or belugas in the river's estuary on Hudson Bay.



CHURCHILL RIVER BASIN

The Churchill River Basin is rich in natural and heritage resources, supporting trapping, fishing, mining and tourism. The Churchill area has been a native meeting place for centuries. Much of the flow in the lower reaches of the Churchill river has been diverted to generate hydroelectric power.



NELSON RIVER BASIN

The Nelson River is by far the largest river in Manitoba, draining most of Manitoba, much of Saskatchewan and Alberta, and part of Northwestern Ontario. Over 70% of Manitoba's hydroelectric power is generated by the Nelson River.

HAYES RIVER BASIN

A landfall for European explorers since the early 1600's, the Hayes has a history of use second only to the St. Lawrence in significance to the development of Canada as a nation. For more than 150 years the most efficient way of moving goods and people into what is now Central and Western Canada, the Hayes now provides a superlative recreation experience for the seasoned wilderness enthusiast.

Northern Manitoba has been blessed with an abundance of natural resources. Many Northerners make their living off the land through trapping, hunting, tourism and other jobs which are dependent upon the land and water resources.

However, 1988 has demonstrated that the north is not immune to drought and forest fires that can threaten the resource base and livelihood of northern Manitobans.

We must move towards a conservation strategy that will ensure our economic prosperity and conserve our resource base for our children and their children.

With your help this process has now begun... through the development of a provincial water management strategy. This strategy will define policies for managing our water resources. A water management strategy can only be developed through your input and involvement. Government alone cannot take on a challenge of this magnitude without first asking you to pitch in and voice your ideas, concerns and vision. Together, we can guide the management of our water resources and ensure their viable uses.

Please fill out the questionnaire in the *Workbook on Water* to provide us with your suggestion and concerns.

Honourable Jack Penner

Honourable James Downey